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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/943,685	08/30/2001	Terry Loughrin	6039-000293	1262

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EXAMINER

DUNWOODY, AARON M

ART UNIT

PAPER NUMBER

3679

DATE MAILED: 10/04/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

09/943,685

Applicant(s)

LOUGHRIN ET AL.

Examiner

Aaron M Dunwoody

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 30 September 2001.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-4, 6-8, 10 and 11 is/are rejected.
- 7) ☒ Claim(s) 5 and 6 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Information Disclosure Statement

No Information Disclosure Statement submitted.

Drawings

The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 34. A proposed drawing correction or corrected drawings are required in reply to the Office action to avoid abandonment of the application. The objection to the drawings will not be held in abeyance.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in-

(1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or

(2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

Claims 1-4, 6-8, 10 and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by US patent 6283867, Aota et al.

In regards to claim 1, in figures 9-12, Aota et al discloses a drive shaft assembly for interconnecting a driving component and a driven component, comprising a first shaft; a second shaft engaging the first shaft for enabling torque transmission and

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relative axial sliding motion therebetween; and a joint component of a universal joint operably interconnecting one of the first and second shafts to one of the driving and driven components, the joint component is both rotatable through a specified range of rotation and is fixed from axial movement relative to one of the second shaft, the driving component and the driven component.

In regards to claim 2, in figures 9-12, Aota et al discloses the joint component including axial grooves and the second shaft includes an end portion having radially extending axial teeth for engaging the grooves and thereby enabling the specified range of relative rotation.

In regards to claim 3, in figures 9-12, Aota et al discloses the grooves being formed within a bore of the joint component and the teeth extend outward from the end portion, whereby the end portion is received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 4, in figures 9-12, Aota et al discloses the grooves being formed in an outer circumferential surface of the joint component and the teeth extend radially inward from the end portion, whereby the joint component is partially received into the end portion for enabling engagement between the teeth and the grooves.

In regards to claim 6, in figures 9-12, Aota et al discloses the joint component including axial grooves and one of the driving and driven components includes radially extending axial teeth for engaging the grooves and thereby enabling the specified range of relative rotation.

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In regards to claim 7, in figures 9-12, Aota et al discloses the grooves being formed within a bore of the joint component and the teeth extend radially outward from one of the driven and driving components, whereby one of the driven and driving components is received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 8, in figures 9-12, Aota et al discloses the grooves being formed along a stub end of the joint component and the teeth extend radially inward within a bore of one of the driven and driving components, whereby the stub end is partially received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 10, in figures 9-12, Aota et al discloses the joint component being a universal joint yoke.

In regards to claim 11, in figures 9-12, Aota et al discloses the second shaft including a stub end interconnected thereto for operably interconnecting the joint component and the second shaft.

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-4, 6-8, 10 and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by US patent 5672111, Schremmer et al.

In regards to claim 1, in figures 1-4, Schremmer et al discloses a drive shaft assembly for interconnecting a driving component and a driven component, comprising a first shaft; a second shaft engaging the first shaft for enabling torque transmission and

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relative axial sliding motion therebetween; and a joint component of a universal joint operably interconnecting one of the first and second shafts to one of the driving and driven components, the joint component is both rotatable through a specified range of rotation and is fixed from axial movement relative to one of the second shaft, the driving component and the driven component.

In regards to claim 2, in figures 1-4, Schremmer et al discloses the joint component including axial grooves and the second shaft includes an end portion having radially extending axial teeth for engaging the grooves and thereby enabling the specified range of relative rotation.

In regards to claim 3, in figures 1-4, Schremmer et al discloses the grooves being formed within a bore of the joint component and the teeth extend outward from the end portion, whereby the end portion is received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 4, in figures 1-4, Schremmer et al discloses the grooves being formed in an outer circumferential surface of the joint component and the teeth extend radially inward from the end portion, whereby the joint component is partially received into the end portion for enabling engagement between the teeth and the grooves.

In regards to claim 6, in figures 1-4, Schremmer et al discloses the joint component including axial grooves and one of the driving and driven components includes radially extending axial teeth for engaging the grooves and thereby enabling the specified range of relative rotation.

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In regards to claim 7, in figures 1-4, Schremmer et al discloses the grooves being formed within a bore of the joint component and the teeth extend radially outward from one of the driven and driving components, whereby one of the driven and driving components is received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 8, in figures 1-4, Schremmer et al discloses the grooves being formed along a stub end of the joint component and the teeth extend radially inward within a bore of one of the driven and driving components, whereby the stub end is partially received into the bore for enabling engagement between the teeth and the grooves.

In regards to claim 10, in figures 1-4, Schremmer et al discloses the joint component being a universal joint yoke.

In regards to claim 11, in figures 1-4, Schremmer et al discloses the second shaft including a stub end interconnected thereto for operably interconnecting the joint component and the second shaft.

Allowable Subject Matter

Claims 5 and 9 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

The following is a statement of reasons for the indication of allowable subject matter:

The prior art of record does not disclose a drive shaft assembly having a ring engaged with a ring groove of one of the joint component and the second shaft for fixing relative

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axial motion therebetween. The Examiner recognizes that references cannot be arbitrarily combined and that there must be some reason why one skilled in the art would be motivated to make a proposed combination of primary and secondary references.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Aaron M Dunwoody whose telephone number is (703) 306-3436. The examiner can normally be reached on Monday - Friday between 7:30 am to 4:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Lynne H Browne can be reached on (703) 308-1159. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9302 for regular communications and (703) 872-9327 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 308-1113.

.amd
September 29, 2002


Lynne H. Browne
Supervisory Patent Examiner
Technology Center 3670